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[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-0944; Directorate Identifier 2011-NE-11-AD]

RIN 2120-AA64

Airworthiness Directives; Pratt & Whitney Division (PW) PW4000 Series Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for PW4000 series turbofan engines. This proposed AD would require replacing the fuel metering unit (FMU), part number (P/N) 50U150, at the next shop visit after the effective date of this proposed AD. This proposed AD was prompted by an engine overspeed event that occurred during taxi and resulted in a high-pressure compressor (HPC) surge and tailpipe fire. We are proposing this AD to prevent engine overspeed on these engines, which could result in an uncontained engine failure and damage to the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Pratt & Whitney, 400 Main St., East Hartford, CT 06108, phone: 860-565-8770. You may review copies of the referenced service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: James Gray, Aerospace Engineer, Engine Certification Office, FAA, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7742; fax: 781-238-7199; e-mail: james.e.gray@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2011-0944; Directorate Identifier 2011-NE-11-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We received a report of an engine overspeed during taxi, which resulted in an HPC surge and tailpipe fire. Although the event was not an uncontained engine failure, engine overspeed events compromise the integrity of the rotor and can lead to an uncontained engine failure. Our investigation concluded that the existing FMU is susceptible to a single-point failure condition in which a complete or nearly complete blockage of the FMU servo wash filter could occur. A blockage in the FMU servo wash filter could result in insufficient hydraulic pressure being available to properly control the FMU and actuator functions. Inability to control the FMU and actuator functions, if not corrected, could result in an engine overspeed and an uncontained engine failure and damage to the airplane.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require replacing the FMU, P/N 50U150, at the next shop visit after the effective date of this proposed AD.

Costs of Compliance

We estimate that this proposed AD affects 750 engines installed on airplanes of U.S. registry. We also estimate that it would take about 3.2 work-hours per product to comply with this proposed AD. The average labor rate is \$85 per work-hour. Required

parts would cost about \$10,698 per engine. Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be \$8,227,500.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

Pratt & Whitney Division (PW): Docket No. FAA-2011-0944; Directorate Identifier 2011-NE-11-AD.

Comments Due Date

(a) We must receive comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

Affected ADs

(b) None.

Applicability

(c) This AD applies to all PW PW4050, PW4052, PW4056, PW4060, PW4060A, PW4060C, PW4062, PW4062A, PW4152, PW4156, PW4156A, PW4158, PW4160, PW4460, PW4462, and PW4650 turbofan engines, including models with any dash number suffix.

Unsafe Condition

(d) This AD was prompted by an engine overspeed event that occurred during taxi and resulted in a high-pressure compressor surge and tailpipe fire. We are issuing this AD to prevent engine overspeed on these engines, which could result in an uncontained engine failure and damage to the airplane.

Compliance

(e) Comply with this AD within the compliance times specified, unless already done.

Replacement of Fuel Metering Unit (FMU), Part Number (P/N) 50U150

(f) At the next shop visit after the effective date of this AD, remove FMU, P/N 50U150, and install an FMU that has been modified as specified in paragraphs 2.A through 2.C of the Accomplishment Instructions of PW Alert Service Bulletin PW4ENG A73-220, Revision 1, dated May 18, 2011.

Installation Prohibition

(g) Three years from the effective date of this AD, do not install FMU, P/N 50U150, onto any engine.

Definition of Shop Visit

(h) For the purpose of this AD, a shop visit is when the engine is inducted into the shop for any maintenance involving the separation of pairs of major mating engine flanges (lettered flanges). However, the separation of engine flanges solely for the purposes of transporting the engine without subsequent engine maintenance is not an engine shop visit.

Alternative Methods of Compliance (AMOCs)

(i) The Manager, Engine Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

Related Information

(j) For more information about this AD, contact James Gray, Aerospace Engineer, Engine Certification Office, FAA, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7742; fax: 781-238-7199; e-mail: james.e.gray@faa.gov.

(k) For service information identified in this AD, contact Pratt & Whitney, 400 Main St., East Hartford, CT 06108; phone: 860-565-8770. You may review copies of the referenced service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on October 31, 2011.

Peter A. White,
Manager, Engine & Propeller Directorate,
Aircraft Certification Service.

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